(19) World Intellectual Property Organization

International Bureau



(43) International Publication Date 28 July 2005 (28.07.2005)

(10) International Publication Number WO 2005/068432 A1

- (51) International Patent Classification7: C07D 231/12. 261/08, 275/02, 263/32, 277/30, 277/32, 277/34, 285/08, 271/10, 271/06, 471/04, 403/04, 233/84, A01N 43/50,
- (21) International Application Number:

PCT/JP2005/000629

- (22) International Filing Date: 13 January 2005 (13.01.2005)
- (25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

2004-009149

16 January 2004 (16.01.2004)

- (71) Applicant (for all designated States except US): SUM-ITOMO CHEMICAL COMPANY, LIMITED [JP/JP]; 27-1, Shinkawa 2-chome, Chuo-ku, Tokyo, 1048260 (JP).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): MITSUDERA, Hiromasa [JP/JP]; 31-8, Machikaneyama-cho, Toyonaka-shi, Osaka, 5600043 (JP). OTAKA, Ken [JP/JP]; 11-18, Kashima-machi Kubo Aza-sorimachi, Iwaki-shi, Fukushima, 9718144 (JP). FUJIWARA, Jun [JP/JP]; 6-15, Takezono-cho, Ashiya-shi, Hyogo, 6590055 (JP).

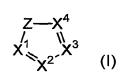
- (74) Agents: KAWAMIYA, Osamu et al.; AOYAMA & PART-NERS, IMP Building, 3-7, Shiromi 1-chome, Chuo-ku, Osaka-shi, Osaka 5400001 (JP).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: MALONONITRILE COMPOUND AS PESTICIDES



(57) Abstract: The present invention provides a malononitrile compound represented by the formula (I): wherein any one of X1, X2, X3 and X4 is CR100, wherein R100 is a group represented by the formula: the other three of X1, X2, X3 and X4 each represent nitrogen or CR5, provided that 1 to 3 of X1, X2, X3 and X4 represent nitrogen, and Z represents oxygen, sulfur or NR6, which has pest-controlling activity.

$$R^1$$
 R^2 R^3 R^4 R^4 (II)